

WHAT IS CLAIMED IS:

1 1. A node-search method in a network, comprising the
2 steps of:
3 acquiring a packet which includes routing information
4 in which a domain in the network is listed;
5 sending a broadcast packet, for requesting a response
6 from a node which provides a specific service, to said
7 domain which is listed in said acquired routing
8 information; and
9 receiving a response packet for said broadcast packet
10 and detecting the node which sent the response packet.

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1 2. A node-search method in a network, comprising the
2 steps of:
3 sending a packet, for requesting routing information
4 from the network which is connected to an interworking
5 unit, to the interworking unit, which is capable of storing
6 routing information set in advance;
7 receiving a packet containing said routing
8 information;
9 sending a broadcast packet, for requesting a response
10 from a node that provides a specific service, to a domain
11 which is listed in said received routing information; and
12 receiving a response packet in response to said
13 broadcast packet, and detecting the node which sent the

14 response packet.

1 3. A node-search method for searching for a node
2 providing service in a network configured with a plurality
3 of domains, comprising:

4 a first process for searching for all of the domains
5 of the network, and

6 a second process for searching for nodes which provide
7 a specific service in at least one of the domains which is
8 contained in a search result in said first process.

1 4. A node-search method in a network, comprising the
2 steps of:

3 receiving a RIP (Routing Information Protocol) packet;
4 acquiring information indicating a network number and
5 an address of a router of each domain in the network from
6 said received RIP packet; and

7 broadcasting, based on said acquired information, into
8 a specific network so as to search for a node, using a
9 specific port number.

1 5. A node-search device for searching for a node in a
2 network, comprising:

3 network interface means for connecting with the
4 network;

5 means for acquiring domain information from a packet

6 containing routing information which was acquired by said
7 network interface means;
8 means for finding broadcast addresses for said
9 domains;
10 means for generating a request packet to be sent to
11 said found broadcast addresses for finding a response from
12 a node which provides a specific service, and sending the
13 packet to the network through said network interface means;
14 and
15 means of extracting information indicating that
16 indicates nodes which perform said specific service, which
17 is contained in a response packet to said request packet.

1 6. A node-search device for searching for a node in a
2 network, comprising:
3 means for sending a packet, for requesting routing
4 information for a network connected to an interworking
5 unit, to the interworking unit, which is capable of storing
6 preset routing information;
7 means for receiving a packet containing said routing
8 information and acquiring information indicating a node
9 contained in said routing information;
10 means for sending a request packet, for requesting a
11 response from a node which provides a specific service,
12 which is broadcasted domains connected through the
13 interworking unit, to the interworking unit; and

14 means for receiving a response packet for said request
15 packet and detecting the node which sent the response
16 packet.

1 7. A computer-readable storage medium in which a program
2 which is executed by a computer for searching for a node in
3 a network is recorded, wherein:

4 said program makes the computer execute:

5 a process of acquiring a packet containing routing
6 information in which a domain in the network is listed,
7 which is sent to the network;

8 a process of sending a broadcast packet, for
9 requesting a response from a node which provides a specific
10 service, to said domain which is listed in said acquired
11 routing information; and

12 a process of receiving a response packet for said
13 broadcast packet and detecting the node which sent the
14 response packet.

1 8. A computer-readable storage medium in which a program
2 which is executed by a computer for searching for a node in
3 a network is recorded, wherein:

4 said program makes the computer execute:

5 a process of sending a packet, for requesting routing
6 information in the network which is connected to an
7 interworking unit, to the interworking unit, which is

8 capable of storing routing information set in advance;
9 a process of receiving a packet containing said
10 routing information;
11 a process of sending a broadcast packet for requesting
12 a response from a node which provides a specific service,
13 to a domain which is listed in said received routing
14 information; and
15 a process of receiving a packet in response to said
16 broadcast packet, and detecting the node which sent the
17 response packet.

1 9. A storage medium in which a program is stored,
2 according to Claim 8, wherein:
3 said interworking unit is a router.

1 10. A computer-readable storage medium for storing a
2 program which is executed by a computer for searching for a
3 service providing node in a network configured with a
4 plurality of domains, wherein:
5 said program makes the computer execute:
6 a first process for searching for all of the domains
7 of the network, and
8 a second process for searching for a node providing a
9 specific service in at least one of the domains which is
10 contained in a search result in said first process.

1 11. A storage medium in which a program is recorded,
2 according to Claim 10, wherein said program makes the
3 computer execute the steps of:

4 in said first process, sending a packet requesting
5 routing information to a device in which the routing
6 information is stored so as to acquire information
7 indicating the domains, and

8 in said second process, receiving operation designating
9 at least one domain from said acquired information
10 indicating the domains, broadcast sending a server name
11 request packet requesting a node name of the node providing
12 the specific service to the designated domain, and creating
13 a server list from server names contained in a response
14 packet for the server name request packet.

1 12. A storage medium in which a program is recorded,
2 according to Claim 11, wherein said program further makes
3 the computer execute the steps of:

4 in said second process, receiving operation
5 designating the kind of the service which is provided by
6 said node, and broadcast sending a server name request
7 packet for requesting a node name of a node providing the
8 designated service.

1 13. A computer-readable storage medium in which a program
2 which is executed by a computer for searching for a service

3 providing node in a network configured with a plurality of
4 domains is recorded, wherein:

5 said program makes the computer execute:

6 a process of receiving a RIP (Routing Information
7 Protocol) packet;

8 a process of acquiring information indicating a
9 network number and mail address of each domain in the
10 network from said received RIP packet; and

11 a process of broadcasting, based on said acquired
12 information, into a specific network so as to search for a
13 node, using a specific port number.

1 14. A computer-readable storage medium in which a program
2 which is executed by a computer for searching for a service
3 providing node in a network configured with a plurality of
4 domains, wherein:

5 said program makes the computer execute:

6 a process of receiving an SNMP (Simple Network
7 Management Protocol) packet;

8 a process of acquiring information indicating a
9 network number and an address of a router of each domain in
10 the network from the received SNMP packet;

11 a process of broadcasting into a specific network,
12 based on said acquired information so as to search for a
13 node, using a specific port number.